#15 x y
$(1,2)$ $(2,5)$
x_1 y_1 x_2 y_2

① FIND m

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{5-2}{2-1}$

$= \frac{3}{1}$

$m = 3$

② $y = mx + b$

$2 = 3(1) + b$

$2 - 3 = b$

$-1 = b$

③ $y = mx + b$

$\boxed{y = 3x - 1}$

#16 x y
$(-4,1)$ $(1,-2)$
x_1 y_1 x_2 y_2

① $m = \frac{(-2)-(1)}{(1)-(-4)}$

$= \frac{-3}{1+4}$

$= \frac{-3}{5}$

② $y = mx + b$

$-2 = (\frac{-3}{5})(1) + b$

$-2 = -\frac{3}{5} + b$

$-2 + \frac{3}{5} = b$

$-\frac{7}{5} = b$

③ $y = mx + b$

$\boxed{y = -\frac{3}{5}x - \frac{7}{5}}$

ex: $(3,1)$ $(5,1)$

$\boxed{y = 1}$

ex: $(8,1)$ $(8,2)$

$\boxed{x = 8}$

#17 $y = 5x - 1$

$m = 5$ $m = \frac{5 \text{ UPS}}{1 \text{ R}1}$

y-INT: -1 $(0,-1)$

#18 $8x + 4y = 16$

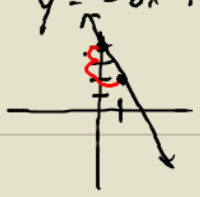
$4y = -8x + 16$

$\frac{4}{4}y = \frac{-8}{4}x + \frac{16}{4}$

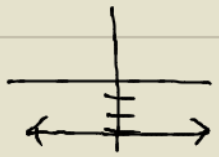
$y = -2x + 4$

$m = \frac{-2}{1}$ — DOWN 2 — R 1

y-INT: 4



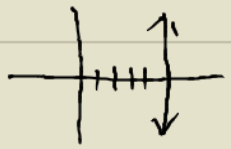
#19 $y = -3$



$m = 0$

y-INT: -3

ex: $x = 5$



m IS UNDEFINED

y-INT: NONE